

Exhibit No.: 602
Witness: Maurice Brubaker
Type of Exhibit: Surrebuttal Testimony
Issue: Rate Design
Sponsoring Parties: Ford Motor Company, Praxair, Inc. and
Missouri Industrial Energy Consumers
Case No.: ER-2007-0291

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

In the Matter of the Application of
Kansas City Power & Light Company
for Approval to Make Certain Changes
in its Charges for Electric Service to
Implement its Regulatory Plan

Case No. ER-2007-0291

Surrebuttal Testimony of

**Maurice Brubaker
on Rate Design**

On Behalf of

**Ford Motor Company
Praxair, Inc. and
Missouri Industrial Energy Consumers**

September 20, 2007
Project 8766



BRUBAKER & ASSOCIATES, INC.
ST. LOUIS, MO 63141-2000

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Case No(s) ER-2007-0291
Date 10/1/07 Rptr JV

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STATE OF MISSOURI)

COUNTY OF ST. LOUIS)

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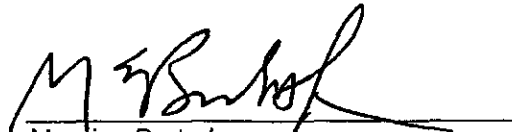
Affidavit of Maurice Brubaker

Maurice Brubaker, being first duly sworn, on his oath states:

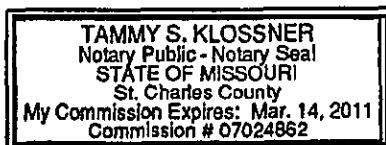
1. My name is Maurice Brubaker. I am a consultant with Brubaker & Associates, Inc., having its principal place of business at 1215 Fern Ridge Parkway, Suite 208, St. Louis, Missouri 63141-2000. We have been retained by Ford Motor Company, Praxair, Inc. and Missouri Industrial Energy Consumers in this proceeding on their behalf.


2. Attached hereto and made a part hereof for all purposes is my surrebuttal testimony on rate design which was prepared in written form for introduction into evidence in Missouri Public Service Commission Case No. ER-2007-0291.

3. I hereby swear and affirm that the testimony is true and correct and that it shows the matters and things that it purports to show.


Maurice Brubaker

Subscribed and sworn to before this 19th day of September 2007.




Notary Public

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Surrebuttal Testimony of Maurice Brubaker

1 **Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 **A Maurice Brubaker. My business address is 1215 Fern Ridge Parkway, Suite 208,**
3 **St. Louis, Missouri 63141-2000.**

4 **Q WHAT IS YOUR OCCUPATION?**

5 **A I am a consultant in the field of public utility regulation and president of Brubaker &**
6 **Associates, Inc., energy, economic and regulatory consultants.**

7 **Q ARE YOU THE SAME MAURICE BRUBAKER WHO PREVIOUSLY PRESENTED**
8 **RATE DESIGN DIRECT TESTIMONY?**

9 **A Yes. I filed rate design direct testimony on August 7, 2007.**

10 **Q ARE YOUR QUALIFICATIONS ATTACHED TO THAT TESTIMONY?**

11 **A Yes, they are.**

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1 **Q WHAT IS THE SUBJECT OF THIS TESTIMONY?**

2 A I will respond to the rebuttal testimony of those parties who expressed reservations
3 about my rate design proposal. In this regard, I will address comments made by
4 Kansas City Power & Light Company (KCPL) witness Tim Rush, and by Missouri
5 Public Service Commission Staff (Staff) witness James Watkins.

6 **Q BEFORE PROCEEDING TO DO SO, PLEASE BRIEFLY SUMMARIZE THE**
7 **RECOMMENDATION MADE IN YOUR DIRECT TESTIMONY.**

8 A In my direct testimony, I recommended moving a certain amount of revenue collection
9 from the energy charges in the LPS rate to the demand charges in the LPS rate. The
10 recommendation was based on my analysis of the variable costs which KCPL
11 proposes to include in its revenue requirement in this case. The variable cost used in
12 my recommendation is before subtracting the margin from off-system sales. Had the
13 margin on off-system sales been subtracted, the amount of variable cost per kWh
14 would have been lower, and the amount to be transferred from energy charges to
15 demand charges would have been even higher .

16 In particular, I recommended transferring 1.0¢ per kWh from the energy
17 charges in the LPS rate to the demand charges in the LPS rate. This adjustment is
18 revenue neutral and only affects customers taking service under the LPS rate.

19 **Q DID YOU RELY ON THE RESULTS OF ANY CLASS COST OF SERVICE STUDY**
20 **IN DEVELOPING THIS RECOMMENDATION?**

21 A No. I relied upon KCPL's revenue requirement filing in this case.

1 **Response to Mr. Rush**

2 **Q AT PAGE 2 OF HIS REBUTTAL TESTIMONY, LINE 12, MR. RUSH STATES A**
3 **BELIEF THAT YOUR PROPOSAL IS "...INCONSISTENT WITH THE TERMS OF**
4 **THE S&A REGARDING RATE STRUCTURE CHANGES." DO YOU AGREE WITH**
5 **MR. RUSH'S INTERPRETATION?**

6 **A No. He is, of course, referring to the Stipulation and Agreement (S&A) in the**
7 **Experimental Regulatory Plan, Case No. EO-2005-0329. As he accurately notes at**
8 **the top of page 2 of his rebuttal testimony, the applicable language of the S&A states**
9 **that the signatory parties would agree not to file new or updated class cost of service**
10 **studies or to propose changes to rate structure in this rate filing.**

11 I have not filed new or updated class cost of service studies, nor have I
12 proposed changes to "rate structure." Rather, I have proposed changes to the design
13 of rates within the existing structure.

14 **Q PLEASE ELABORATE.**

15 **A Rate structure may generally be thought of as the number of rate schedules, the**
16 **types of charges within the rate schedule and the number of blocks through which**
17 **revenues are collected as a function of customer consumption. I have not changed**
18 **any of those aspects of the rates. Rather, based on a current calculation from the**
19 **Company's revenue requirement filing, I have determined that the design of the LPS**
20 **rate is such that too much money is being collected from the energy charges, and not**
21 **enough money is being collected from the demand charges. Hence, I have proposed**
22 **a rate design adjustment which changes where some of the costs are recovered**
23 **within the structure of the existing rate.**

1 **Q TO DISTINGUISH YOUR RECOMMENDATION FROM A CHANGE IN RATE**
2 **STRUCTURE, CAN YOU GIVE AN EXAMPLE OF WHAT WOULD BE A CHANGE**
3 **IN RATE STRUCTURE?**

4 **A** Yes. For example, eliminating a rate schedule altogether would be an example of a
5 change in rate structure. Reducing or increasing the number of demand or energy
6 blocks within an existing rate schedule would be a change in rate structure.
7 Establishing an entirely new rate schedule would be a change in rate structure.

8 **Q CAN YOU ILLUSTRATE THIS IN MORE COMMON TERMS?**

9 **A** Yes. One useful analogy may be to an office park. An office park may consist of
10 several different buildings, and in each building will be a certain arrangement or
11 layout of offices. A change in structure would be adding new buildings, tearing down
12 existing buildings, or rearranging the walls or partitions within a building so as to
13 create more or fewer offices or distinct areas.

14 Moving furniture, files and people among existing offices and buildings,
15 without changing the layout or "structure" of the space, would be analogous to rate
16 design because it is simply a matter of determining what goes where within the
17 existing structure.

18 **Q ARE THE TERMS RATE DESIGN AND RATE STRUCTURE ALWAYS USED IN**
19 **THIS PRECISE A FASHION?**

20 **A** No. Parties sometimes refer to a rate case as consisting of a revenue requirement
21 phase and a rate design phase. In this context, the rate design phase is broadly
22 understood to include class cost of service studies, interclass revenue allocations,

1 rate structure and rate design. In the sense in which the term "rate design" is used in
2 that context, it has a much broader meaning than it does in the context of the S&A.

3 **Q WERE YOU A PARTICIPANT IN THE DEVELOPMENT OF THE S&A IN THE**
4 **REGULATORY PLAN CASE?**

5 A Yes.

6 **Q PLEASE PROVIDE SOME CONTEXT FOR THE AGREEMENT NOT TO ADDRESS**
7 **RATE STRUCTURE ISSUES IN THESE INTERMEDIATE RATE CASES.**

8 A In general, the concept was to avoid KCPL and the parties having to do extensive
9 analysis to determine the impacts of restructuring the rates as a result of
10 modifications such as changing the blocking of the rate, which would have required
11 rather significant rate research to accomplish.

12 I had discussions with at least some parties about what the agreement meant,
13 and came away from those discussions comfortable that the kind of adjustment I
14 have proposed in my direct testimony in this case was acceptable within the terms of
15 the S&A.

16 **Q ALONG SIMILAR LINES, DID YOU HAVE AN UNDERSTANDING THAT THE**
17 **SIGNATORY PARTIES WERE AGREEING TO MAKE ALL RATE INCREASES AN**
18 **EQUAL PERCENT ACROSS-THE-BOARD INCREASE TO ALL CLASSES?**

19 A No. The agreement of the signatory parties simply was not to present new class cost
20 of service studies, or to update the results of cost of service studies they had
21 previously submitted. It was not my understanding that parties were agreeing not to

1 propose interclass revenue allocations that were different from equal percent
2 across-the-board changes.

3 **Q AT PAGE 3 OF HIS TESTIMONY, MR. RUSH INDICATES THAT IF YOUR RATE**
4 **DESIGN WERE ADOPTED, SOME CURRENT LPS CUSTOMERS WOULD FIND IT**
5 **MORE ADVANTAGEOUS TO TAKE SERVICE ON THE LGS RATE, AND AS A**
6 **RESULT KCPL WOULD SEE A REDUCTION IN REVENUES. DO YOU AGREE**
7 **WITH MR. RUSH'S ASSESSMENT?**

8 A I agree that the result of my rate design would be that some of the lower load factor
9 LPS customers would find it more economical to take service on the LGS tariff. As a
10 result of this migration, there would be some shrinkage of revenue for KCPL unless
11 an offsetting adjustment were made to recover the revenue differential from the
12 remaining LPS class customers.

13 **Q WOULD YOU SUPPORT SUCH AN ADJUSTMENT?**

14 A Yes, I would. While it would be important to make the adjustment in an appropriate
15 manner, an adjustment is appropriate because the intent was not to cause KCPL to
16 suffer a loss of revenue as a result of this customer migration. It is my understanding
17 that the amount of revenue difference would be less than 2% of the LPS revenues.

18 **Q DOES MR. RUSH OFFER ANY SUBSTANTIVE CRITICISMS OF YOUR**
19 **PROPOSAL?**

20 A Only one. He mentions at pages 3 and 4 of his testimony that the lowest kilowatthour
21 energy rates with my proposal would be less than the energy charges in KCPL's

1 "Parallel Generation Tariff." He also notes that the Parallel Generation Tariff has
2 incremental energy costs of 2.4¢ per kWh.

3 **Q HOW DO YOU RESPOND TO MR. RUSH?**

4 A The response is relatively straightforward. The concepts are apples and oranges.
5 The LPS tariff (and all others) is designed to collect the Company's average costs
6 throughout the rate structure, and not its incremental costs. The prices in the Parallel
7 Generation Tariff are essentially the avoided costs, which are the cost of the
8 kilowatthour generated or purchased at the margin and reflect the costs that would be
9 avoided if KCPL purchased from an eligible generating customer, rather than
10 generating the power itself or purchasing it on the market. This is an entirely different
11 concept from collecting the average cost revenue requirement through the tariffs.

12 Accordingly, the observations made by Mr. Rush have no applicability to or
13 bearing upon the design of retail tariffs such as LPS.

14 **Response to Mr. Watkins**

15 **Q DOES STAFF WITNESS WATKINS ADDRESS YOUR PROPOSALS FOR RATE**
16 **LPS?**

17 A Yes. He discusses these at pages 6-7 of his rebuttal testimony.

1 **Q MR. WATKINS STATES BEGINNING AT LINE 17 ON PAGE 6 THAT IF THERE IS**
2 **A REDUCTION IN ENERGY CHARGES, IT SHOULD BE ACCOMPLISHED ON AN**
3 **EQUAL PERCENTAGE BASIS, RATHER THAN BY REDUCING EACH BLOCK**
4 **THE SAME AMOUNT PER KWH AS YOU HAVE DONE. PLEASE RESPOND TO**
5 **MR. WATKINS' SUGGESTION.**

6 **A I disagree with Mr. Watkins. What I proposed was to reduce the amount in excess of**
7 **variable costs collected in each of the load factor-based energy blocks by the same**
8 **amount, because the same amount per kWh of excess is included in each block.**
9 **(The amounts in excess of the variable costs that are included in each of the energy**
10 **blocks are fixed costs, not variable costs.)**

11 Mr. Watkins' approach would not accomplish the desired result because he
12 would be making substantial reductions to the collection of fixed costs in the first two
13 load factor-based blocks, and much less in the final block. The reduction in summer
14 season fixed cost recovery per kWh would be nearly twice as much in the first block
15 as in the final block.

16 **Q BEGINNING AT THE BOTTOM OF PAGE 6 AND CONTINUING TO PAGE 7 HE**
17 **STATES THAT HE FINDS NO BASIS FOR DECLINING BLOCK DEMAND**
18 **CHARGES. DO YOU AGREE?**

19 **A No. I disagree for several reasons.**

20 **Q PLEASE EXPLAIN.**

21 **A First, consider the collection of customer-related costs in the tariff. From the class**
22 **cost of service study in Docket No. ER-2006-0314, the customer-related costs for the**
23 **LPS class can be calculated as approximately \$17,300 per year, or nearly \$1,500 per**

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1 customer, per month. The customer charge in the current rates is slightly less than
2 \$600 per month, so there is a substantial amount of customer-related costs that are
3 not collected through the customer charge. Typically, these additional
4 customer-related costs that are not collected through the customer charge are
5 collected in the early blocks of a declining block demand structure. This is one
6 reason supporting declining block demand charges.

7 A second reason relates to customer size and how customers are served.
8 From the material in Schedule 1 attached to my direct testimony, a calculation can be
9 made to show the average kW demand per month, per customer, by voltage level.
10 The result of that simple calculation is as follows:

<u>Average kW Billing Demand by Voltage Level for LPS Rate*</u>	
<u>Voltage Level</u>	<u>kW of Billing Demand Per Customer-Month</u>
Secondary	1,750
Primary	3,480
Primary-Off-Peak	5,040
Substation	18,730
Transmission	13,470
<hr/>	
*Calculated from Schedule 1 of the Direct Testimony on Rate Design of Maurice Brubaker, and rounded.	

1 **Q HOW DOES THIS RELATE TO THE DESIGN OF THE LPS TARIFF?**

2 A Currently, the LPS tariff does have separate prices for four different voltage levels
3 (Secondary, Primary/Primary-Off-Peak, Substation and Transmission). With the
4 exception of minor differences in the local facilities charges, the only other difference
5 among these charges is the result of reflecting differences in line losses incurred in
6 delivering electricity. The differences in demand prices among the voltage levels
7 does not at all reflect the differences in facilities as a result of the fact that some
8 customers take service at the secondary voltage level, and some take service at the
9 primary voltage level, while other customers take service at the substation and the
10 transmission levels.

11 **Q WHY IS THIS IMPORTANT?**

12 A When customers take service at the substation or transmission level, they do not
13 require the utility to make the investment in the primary distribution network or the
14 secondary distribution network. Because these facilities are not needed to provide
15 service to substation and transmission level customers, there is less cost associated
16 with supplying service to them and they should pay a lower demand charge. The
17 same distinction is present between primary voltage delivery and secondary voltage
18 delivery.

19 Thus, a second reason for the declining block demand tariff is to reflect these
20 differences in cost of service characteristics.

1 **Q PLEASE REFER TO THE TABLE ON PAGE 9 AND EXPLAIN HOW THIS**
2 **RELATES TO THE LPS DEMAND BLOCKS.**

3 **A** Note that customers at the secondary level have the smallest demand, customers at
4 the primary service level have the second highest demand and the substation and
5 transmission customers have the highest demands. Therefore, in order to properly
6 reflect cost of service differences, secondary customers should pay the highest
7 average price per kW, followed by primary service customers and then by substation
8 and transmission level customers.

9 With the declining block rate structure, smaller customers do pay a higher
10 average demand charge per kW while larger customers pay a lower demand charge
11 per kW. This follows the structure of the declining block demand tariffs which have
12 three blocks of approximately 2,500 kW each, followed by a block for demand over
13 7,500 kW. On average, the price per kW paid by customers decreases as size
14 increases, which is in accord with how costs vary.

15 For the above reasons, the existing declining block demand structure is
16 appropriate for the LPS tariff. Mr. Watkins' complicated proposals for adjusting rates
17 would not produce an appropriate result, and he has clearly not shown that his
18 proposals with respect to either energy charges or demand charges are consistent
19 with cost of service.

20 Furthermore, Mr. Watkins' proposal could result in a prohibited change in rate
21 structure if the result would be to reduce the number of blocks in the existing rate
22 structure.

23 **Q DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?**

24 **A** Yes, it does.

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